Clip-on Condenser Microphone KMA

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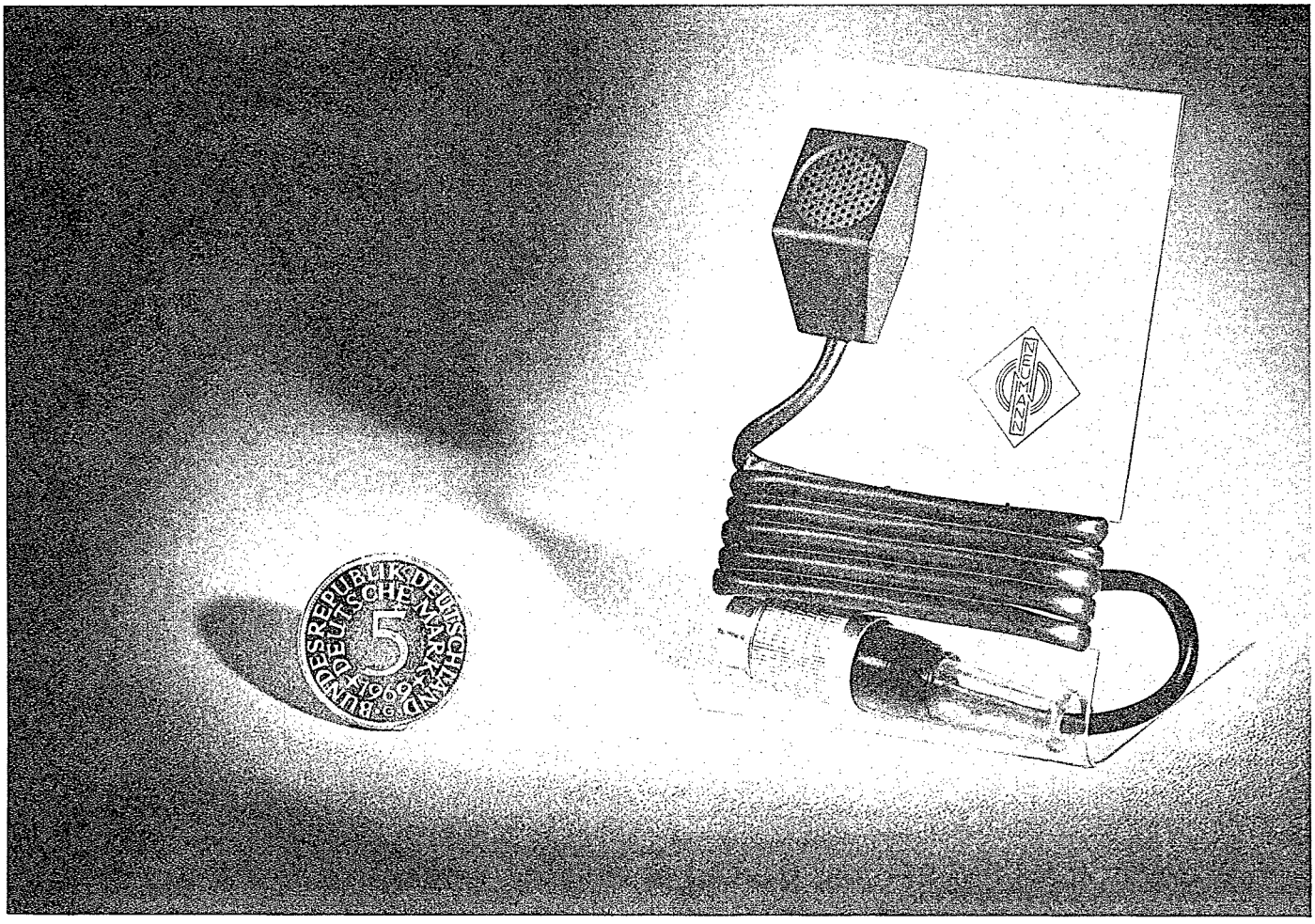

The KMA clip-on condenser microphone was developed with the special needs and requirements of reporters, panelists and quizmasters in mind as well as those for similar stage, film and television applications. This microphone, with the dimensions 18 x 33 mm (approx. 3/4" x 1 3/8") is unusually small for a condenser microphone and it weighs only 30 grams (1 oz.). It contains a microphone capsule which works as a pressure transducer and is equipped with a field effect transistor impedance converter.

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The surface material is non-reflecting dark, thus enabling the microphone to be worn almost unnoticed on the clothing. Connected directly to a TS 83 or TS 83/1 transistor pocket transmitter (manufactured by Beyer, Heilbronn) and used in conjunction with a receiver (an NE 74, for example), the KMA fulfills the requirements of a „wireless microphone". So used, the wearer is no longer bound to one spot and is free to move about. The microphone receives its power from batteries in the transistor transmitter. Since the power consumption is so low, there is practically no lessening of the operating life of the transmitter's batteries.

The microphone may also be powered from any 48 V Phantom-power outlet by using a SWA power supply adapter. It then lends itself to convenient round-table discussion applications. A BS 18 battery box will also operate the microphone. Both the SWA power supply adapter and the BS 18 battery box contain an additional amplifier which raises the microphone output to a source impedance of $\leqq$ 200 Ohm and the normal condenser microphone level of 1 mV/µbar.

Compared with conventional Lavalier microphones, the KMA clip-on model has the following advantages:

Its light weight does not hinder the wearer's freedom of movement.

Noises which often result when a lavalier microphone rubs against clothing are virtually eliminated.

The extremely simple electrical circuitry insures a high degree of trouble-free operation.

The location in which the KMA is normally worn on the body produces, at frequencies above 1000 Hz, a greatly different pressure response curve from that obtained when a comparison microphone is frontally addressed. These properties were compensated entirely by electro-acoustical means in the transducer itself, making electrical corrections unnecessary.

Technical Specifications KMA

Acoustical operating principle	Pressure transducer
Frequency range	40 to 16,000 Hz
Sensitivity (across 2.7 kOhm)	approx. 0.5 mV/µbar
Source impedance	approx. 800 Ohm (unbalanced)
Capsule capacity	approx. 30 pF
Self noise level (DIN 45 405)	$\leqq$ 30 dB (re 2×10^{-4} µbar)
SPL limit	
for 0.5 % THD	$\geqq$ 1 00 µbar $\triangleq$ 114 dB
for 1 % THD	$\geqq$ 200 µbar $\triangleq$ 120 dB
for 3 % THD	$\geqq$ 500 µbar $\triangleq$ 128 dB
Operating voltage	18 V $\pm$ 6 V DC
Current consumption	0.33 mA
Weight	30 gram without plug
Plug connection	T 3400
Pin connections	1 and 2 : 0 V 3 : audio output 6 : + 18 V

Technical Specifications BS 18

Voltage amplification	approx. 6 dB
Source impedance	$\leqq$ 50 Ohm /200 Ohm
Terminating impedance	$\geqq$ 250 Ohm /1000 Ohm
Operating voltage	+ 18 V DC
Current consumption, including KMA	approx. 0.8 mA
Batteries	2 × 9 V (IEC 6 F 22)
Battery operating life	approx. 180 hrs.

Technical Specifications SWA

Voltage amplification	approx. 6 dB
Source impedance	$\leqq$ 50 Ohm /200 Ohm
Terminating impedance	$\geqq$ 250 Ohm /1000 Ohm
Operating voltage	48 V $^{+\,6}_{-\,8}$ V DC
Current consumption	0.4 mA